RISE

Catalysing Global Research Excellence
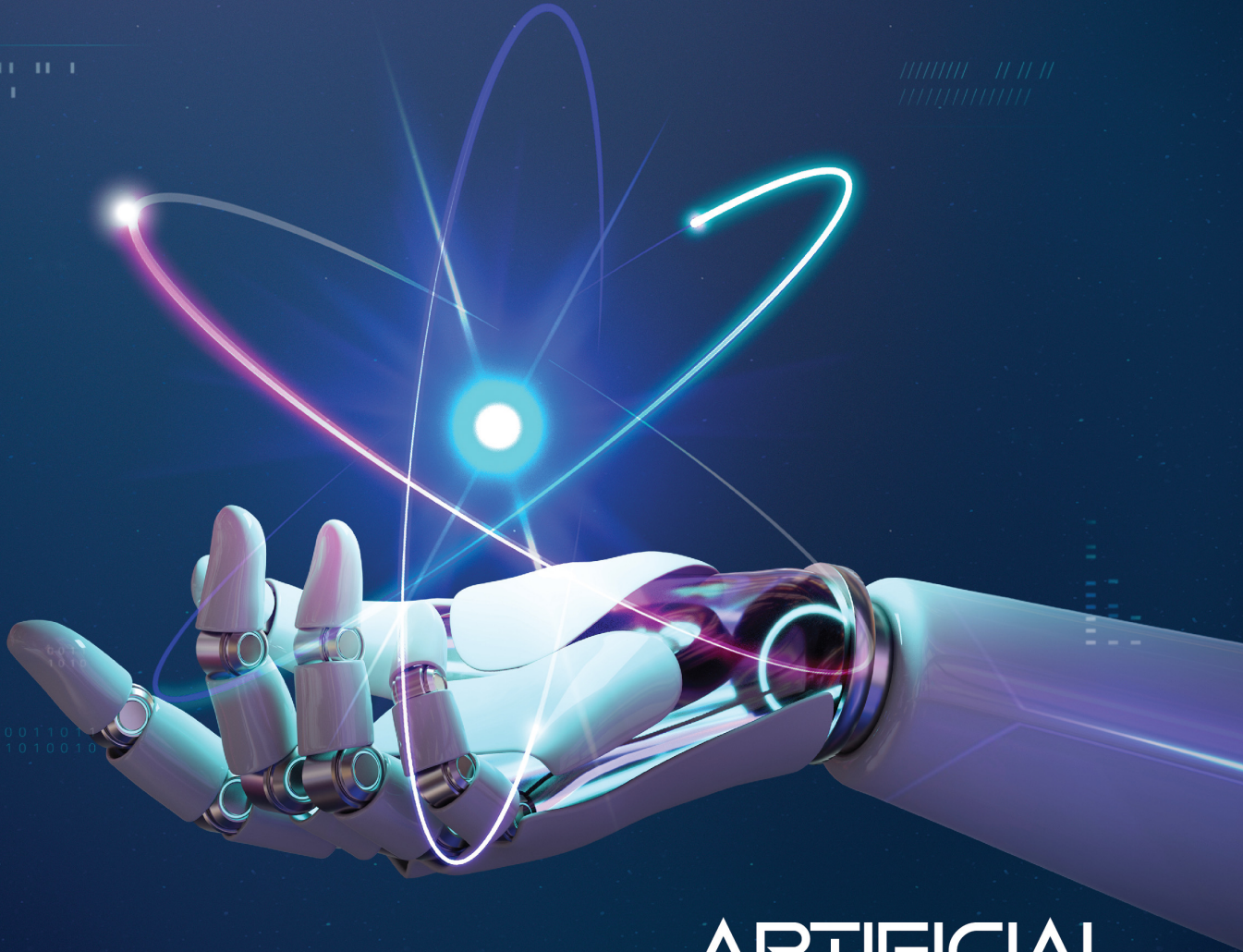
ARTIFICIAL INTELLIGENCE (AI):
Embracing the Future

RISE

ADMINISTRATION

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ABOUT THE MAGAZINE

RISE Magazine is published by Office of the Deputy Vice-Chancellor (Research and Innovation) with aims to highlight a research and innovation on multidisciplinary expert of fields in UiTM. It serves as a platform for researcher to showcase their high quality and impactful findings, activities and innovative solution through publication. Contribution of these ideas come from academicians, researchers, graduates and universities professionals who will enhance the visibility of research and stride to elevate Universiti Teknologi MARA to global standards. This is an effort to promote research as a culture that is accepted by all expertise.

ABOUT UiTM

Universiti Teknologi MARA (UiTM) is a public university based primarily in Shah Alam, Malaysia. It has grown into the largest institution of higher education in Malaysia as measured by physical infrastructure, faculty and staff, and student enrollment. UiTM is the largest public university in Malaysia with numerous campuses throughout all 13 states in Malaysia. There is a mixture of research, coursework and programmes offered to the students. The Office of the Deputy Vice-Chancellor (Research and Innovation) also known as PTNCPI *(Pejabat Timbalan Naib Canselor (Penyelidikan dan Inovasi))* serves as a *Pusat Tanggungjawab* (PTJ) for navigating the research and innovation agenda of the university to achieve UiTM's goals.The PTNCPI office strives to mobilize faculty and campuses, fostering collaboration among researchers, with the aim of transforming the University into a Globally Renowned University by 2025

EMBRACING AI in
Travel and Tourism Industry

The term artificial intelligence (AI) has gained popularity throughout society. AI is defined as the simulation human intelligence processed by machines, particularly computer systems. Expert systems, natural language processing, speech recognition, and machine vision are examples of AI applications that contribute in various ways for the economic growth of the country. Because of its potential to spur economic growth and alter industries, AI is attracting interest on a global scale (Huang, Chao, del la Mora Velasco, Bilgihan, & Wei, 2022). The adoption of AI in the age of digital technology is crucial. Since its inception, it has given a variety of industries, including the hospitality industry, several opportunities and challenges. These days, the hospitality sector operates in a highly competitive climate that is replete with new technology, with clients who demand superior service, hence, adoption of AI is considered necessary when transforming innovation into a global economy. AI powered technologies have been developed with the potential to improve the economy by raising people's living standards (Allam, 2016; Koo et al., 2021; Limna et al., 2021).

In order for the software to learn automatically from patterns or features in the data, AI combines massive amounts of data with quick, iterative processing and sophisticated algorithms. For example, modern technologies like AI and robotics are being used by the hospitality and tourism industries to improve customer service and experience (Goel, Kaushik, Sivathanu, Pillai, & Vikas, 2022). AI has recently been integrated into many areas of the travel and tourism industry, making it easier for both travellers and various industry players. For example, some of the widely used AI features, such as facial recognition systems and airport security scanning devices are in existence. This is because AI serves as a valuable additional component for the future of tourism (Samala, Katkam, Bellamkonda, & Rodriguez, 2020).

There are several AI applications used in the travel industry. **AI assistants for travel bookings** are used by travel reservation giants like Booking.com, Skyscanner, and Expedia to help travellers find the best deals. For example, Skyscanner uses its chatbot to search through booking sites and find the best deals. Through AI technology, companies such as Hotelmize generated USD15 million in added profits for its clients in 2022. This also **raised the business standards** for hotel distributors, bed banks, wholesalers, and travel agents.
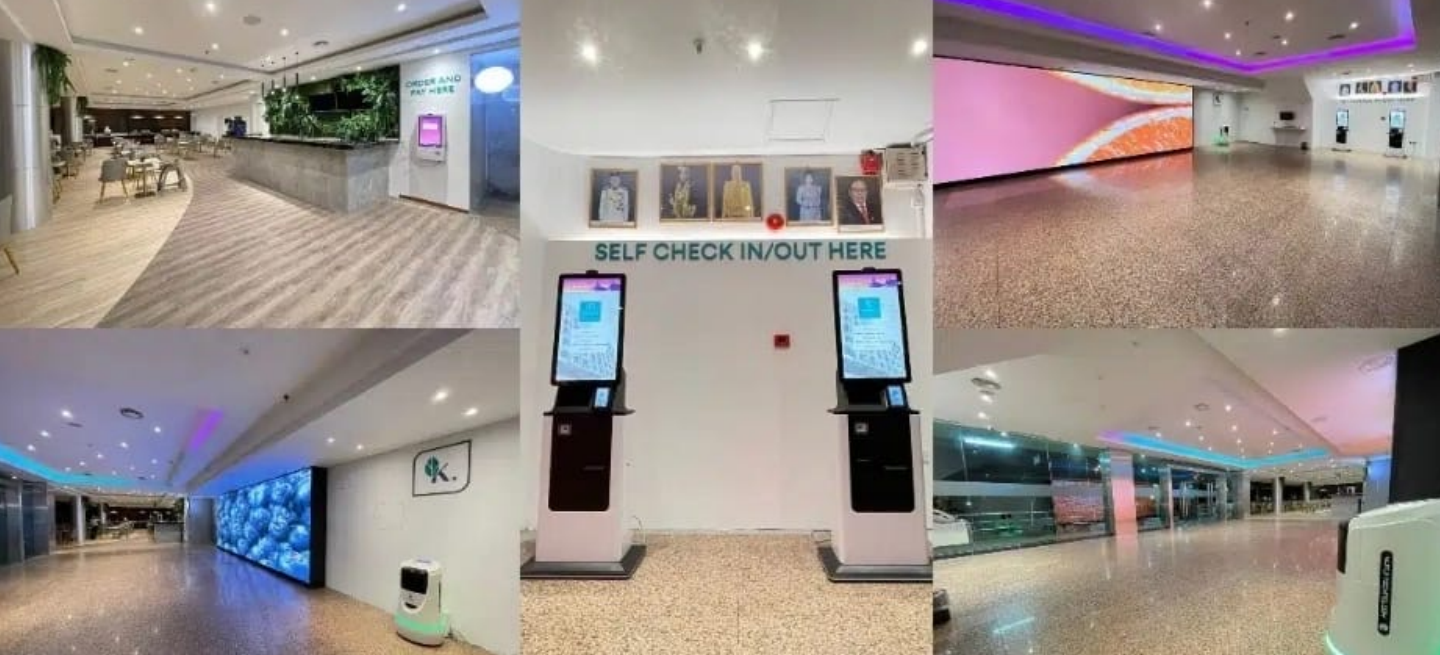
The Skyscanner Chatbot allows users to enter their destination to start a conversation with the bot and receive **price alerts** for a flight. Robots for face-to-face customer service are also being used in the travel industry, such as Google Assistant and Siri. Travel reservation giants like Booking.com, Skyscanner, and Expedia use AI assistants for travel booking to **help travellers find the best deal**. Robots are gradually infiltrating customer service in the travel industry, avoiding the need for human agents. One example is the robot at London Heathrow Airport that **guides passengers through terminals**. According to a report published by Vero Solutions, robots are expected to replace humans in the check-in process by the year 2030.

Another innovative AI solution is 'Connie,' the robot deployed at the Hilton McLean in Virginia. Connie uses the domain knowledge of the IBM Watson AI programme and Wayblazer **to answer human queries related to hotel features and local attractions** while supplying recommendations. AI-driven applications for **flight forecasting** are also being introduced, such as Hopper, which applies machine learning algorithms and uses machine learning to **predict future flight prices**.

unhappiness with certain services by analysing customer discussions, allowing travel businesses to pinpoint areas where adjustments are needed.

In room mapping, AI is tapped to **track dynamic prices** for the same room across multiple suppliers. When adding AI to predict dynamic prices for a specific room, we get a precise idea of when and for how long the price will remain the cheapest it can be.

IATA estimates that upon global recovery from COVID-19, passengers will increase from 4 billion to 8 billion in the year 2036. In handling millions of bags, the airport IT specialist, SITA, is harnessing AI-powered **luggage handling** that will be fully automated and robotic. As self-service becomes the norm in the post-pandemic era, experts are looking for mechanisms for **contactless check-in and check-out procedures**, **and general inquiries**. The industry can expect a rise in use of robots and voice assistants. With the tendency to increase mobile applications that provide **personalised travel planning**, new capabilities will be included to **track passengers' health status** that will integrate wearable technologies and **recommendation of safe travel zones**.

AI is also employed to **discover the sentiment of travellers through postings on social media** and how it relates to the traveller's journey. For instance, if a customer posts about a particular flight delay on social media, expressing his or her frustration, a listening tool will analyse it and interact with the customer in real-time. Mindtree's PaxPulse uses this sentiment analysis to deliver a better customer experience to its travel partners. This is because, through social media, sentiment analysis is used to gauge customer sentiment. AI can detect client pain spots or
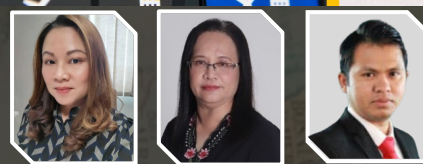
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